NCDENR
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Dexter R. Matthews, Director | Division of Waste Management | Michael F. Easley, Governor
William G. Ross Jr., Secretary

February 15, 2008

Mr. Stephen Cowie
Joyce Engineering, Inc.
2211 West Meadowview Road, Suite 101
Greensboro, NC 27407

Scanned by	Date	Doc ID #
Mary Choo	02/5/08	3974

Re: Comments on Volume II - Application for Permit to Construct Phase 3 (the Application)
Coble's Sandrock, Inc. Construction and Demolition Debris Landfill
Alamance County, North Carolina
Permit # 01-05
Doc ID No. 3974

Dear Mr. Cowie:

The Solid Waste Section (SWS) reviewed the above-referenced document received on November 9, 2007 for the proposed Phase 3 (including Phase 3A [6.3 acres] and Phase 3B [5.8acres]) expansion of the existing Construction and Demolition Debris Landfill (C/DLF) permitted to Coble's Sandrock, Inc (the Applicant). Comments on the above-referenced document are stated below:

Section A – Facility Plan

Figures

Comment 1: (Figure FP-01)

i. Define the number next to the boring designation (such as 594.25 next to the boring P-24).
ii. Make the legend of piezometer location consistent throughout the figures (FP, EP, MP, & H).
iii. Label two structures next to the "Scale House" for their function.
iv. The soil stockpile areas need to be labeled on the Figures FP-01 and EP-01, if they are not removed along with the grading sequences. Please revise the figure accordingly.

Comment 2: The existing road name (Foster Store Road) needs to be labeled on FP-02. The spillway structure legend need be consistent throughout the set of drawings in the Application. Please revise the figure accordingly.

Comment 3: (Figure FP-03)

i. Show only the bearings and distances of the permit-approved property boundaries of the entire site. The old property lines subdividing the permitted property boundaries need be removed.
ii. Provide the legal description indicating metes of bound of the easement of permitted property boundaries and the final deed as an appendix to the Facility Plan.
iii. Show the established permanent benchmark (s) with coordinates tying to the North Carolina State Plane (NCSP) coordinate system to meet the requirements stated in the North Carolina Solid Waste Management Rules (The Rule) 15A NCAC 13B .0540 (3) (a).

Section A. 2 - Landfill Capacity

Comment 1: (the sixth paragraph) The Permit Application indicated eight (8) soil borings have been completed on the site. Please describe which 8 soil borings were referenced in the Application.

Comment 2: The Rule 15A NCAC 13B .0537(e)(2)(B) requires the Applicant to provided the estimates of **gross capacity** (wastes plus final cover and periodic soil cover), not air spaces for wastes only, for the maximum 5-year operating life of the proposed Phase 3 C/DLF unit. Please provide the estimate gross capacity for the proposed Phase 3 landfill unit.

Section A.3 - Special Engineering Features

Comment 1: (Containment and Environmental Control System)

i. Is the infiltration barrier the same as the infiltration layer? Please use the consistent term throughout the Application (including figures).
ii. The last sentence of the "Infiltration Barrier" said" The low-permeability soil layer, or the GCL, will lie directly above an intermediate soil cover layer of at least 6 inches in thickness." However, the Figure EP-06 shown that an intermediate soil cover layer is 12 inches thick. Please clarify.
iii. This subsection referred that the Engineering Plan would discuss the potential proposal of replacing the 18-inch low-permeability soil infiltration layer by a GCL. However, the Section B - Engineering Plan in this Application did not discuss the GCL to be used as an alternative cover material. Please clarify.

Section B- Engineering Plan

Section B.1 Subgrade and Foundation & Appendix I

Comment 1: The following parameters which are used in calculation of foundation soil bearing capacity, settlement, and slope stability must be provided their references, assumption and/or test results:

i. max height of waste - shown reference elevations
ii. 2.25 tsf is used to calculate the loading. Where is the number coming from?
iii. Design parameters including soil density, water content, ϕ angle must be obtained from soil testing results; otherwise, the construction specification must clearly define the material to be used for foundation material pertaining quality equal to and/or exceed those used in the design calculation.
iv. The foundation soils consist of underlying soil and fill material. The bearing capacity formula present in Appendix IA is only applicable to a single uniform soil layer, and this may be acceptable for the landfill foundation on the partial weather rock layer. But, according to Figures H-4A through H-4C, the foundation soil within the certain portions of proposed landfill units consist of saprolite and the partial weather rock layer. For calculation of foundation soil consisting of two different soil strata, a modified bearing capacity equation needs to be employed.
v. The soil and waste parameters (including densities, ϕ angles) used in the C/DLF design in Appendix I shall be constants throughout all designs (bearing capacity, settlement, and slope stability), and the Applicant must elaborate the basis of the assumptions. Since so many soil borings were installed at the proposed landfill locations for Phase 3 expansion project. The blow counts from the SPT testing might be used and converted into initial design parameters which should be verified by laboratory soil testing results.
vi. For Section B-B' in Appendix IC, the lines need to be labeled.

Section B.2 Final Cover System

Comment 1: Typos were found in this subsection.

i. The typical detail of the cap system (Section A-A') can be found on Figure EP-06, and the cross-sections of the proposed cap system can be found on Figure EP-10. Not on Drawing EP-09.
ii. The typical passive gas vent is shown on Figure EP-06, not on Drawing EP-09.

Please make necessary corrections.

Comment 2: What provisions are there for construction of the infiltration layer and protective/erosion cover? Specific concerns, but not limited to, associated with the final cover construction include the thickness of each loss lift and compacted lift, compaction equipment passes to achieve the specified compaction efforts, soil moisture control, treatment on existing surface prior to receiving the next lift. Please clarify.

Comment 3: On Figure EP-06

i. Add run-off direction and designed slope (5% ?) for the Phase 3B landfill unit final cap top.
ii. Show the vegetation legend in the stormwater channel and road side slope.
iii. Add reference of the stormwater channel schedule.
iv. The new sediment basin drain outlet is installed at different location from Figures EP-07 and EP-08.
v. The Figure EP-06 shown that an intermediate soil cover layer is 12 inches thick but this subsection indicated the minimum cover thickness is 6 inches. Please clarify.
vi. The installation of passive gas vents was proposed one vent per acre. The final cap is covering phase 1, 2A, 2B, 3A, and 3B landfill units and approximately 25 acres; there should be 25 gas vent but only 10 gas vents shown on the Figure EP-06. Please explain the discrepancy.

Comment 4: On Figure EP-07

i. Add the outlet to the existing sediment basin on the drawing.

Comment 5: The fourth paragraph of the note for "Maintenance" on Figure EP-07 through EP-09 said that "After grass is established, the channel shall be removed as necessary to maintain the design capacity of the channel." This sentence does not make any sense at all, please clarify.

Section B.3 - Erosion and Sediment control Plan & Appendix II

Comment 1: (Appendix II) There is a typo in the page of "Table of Contents." No drawings are included in the Appendix II. Please make necessary correction.

Comment 2: (Appendix II) The Section 2 stated "a closed LCID landfill" was encompassed within the 160 acres property. However, the location and the description of the closed LCID landfill can not be located in the Permit Application and FP-01. Please clarify.

Section C - Construction Quality Assurance Plan

Comment 1: (Purpose) The "approved Contract Specifications" were referred as the abiding-by documents to be used for this project; however, the document was not provided a part of the Application and cannot be approved by this office, either. Please clarify.

Comment 2: (Responsibilities and authorities - Surveyor) Surveyor must also conduct his/her tasks in compliance with the requirements of survey control and location coordinates in accordance with the Rules 15A NCAC 13B .0540 (3) and (4). Please revise the context.

Comment 3: (Meetings) All meetings must be documented, and meeting minutes must be a part of CQA report. Please revise the context.

Comment 4: (Testing) Table 1 includes testing items, methods, and frequencies for a structure fill. What provisions are there for placement of the structural fill? The plan did not indicate where and when the fill material is to be used. Please clarify.

Comment 5: (Testing) The pass/fail criteria or acceptable zone based on the optimum moisture content and maximum dry density from moisture-density plot should be discussed in this Section. Please clarify.

Section D - Operation Plan

Section D.1 - Waste Acceptance and Disposal

Comment 1: Asbestos waste was not included in the waste streams discussed in the Section A of the Facility Plan. The proposed asbestos waste disposal area was not marked on Figure FP-01. Please revise the context and figure accordingly.

Comment 2: The Rule requires the designated asbestos waste disposal areas in the proposed landfill shall be clearly marked in a manner that buried asbestos wastes will not be exposed by future land disturbing activities. Please add this requirement to the Application.

Comment 3: (The last sentence of the first paragraph) Please replace "the Division" to "the Division of Waste Management (Division)."

Section D.3 - Waste Exclusion

Comment 1: The Rule 15A NCAC 13B.0542 (e)(14) prohibits yard trash to be disposed in the C/DLF. The Applicant should add "yard trash" to the list of Waste Exclusions. Please revise the context accordingly.

Comment 2: The Subsection 3 - Waste Exclusion item (15) referred "Subparagraph (17) of this Paragraph." However, there was no Subparagraph (17) in this Subsection 3. Please clarify.

Section D.7 - Air Criteria and Fire Control

Comment 1: The Operation Plan proposed, if deem necessary, to call the Snow Camp and/or E.M. Holt Volunteer Fire Department for assistance and support in fire fighting that occur at the site. The Permit Application must provide and timely update the information below:

i. The contact persons' names and phone numbers for each above-mentioned fire fighting organization/ department.
ii. The written agreement to demonstrate that the above-mentioned fire fighting responders has the sufficient manpower and equipment to assist in putting down fires at the site.
iii. The Applicant must arrange additional assistance for large fire fighting if the above-mentioned fire fighting organization/ department cannot commit the request stated in the item (ii) of this paragraph.

Please clarify.

Section E - Closure and Post-Closure Plan

Closure

Comment 1: In compliance with the Rule 15A NCAC 13B .0543(d), the Closure Plan must describe the methods and procedures to be used to install the cap system. Please clarify.

Comment 2: (Waste Inventory) The Applicant estimated the projected total tonnage of wastes in place at the end of Phase 3 was approximately 865,280 tons which was referenced to Figure 1 of the Permit Application. However, the estimated cumulative waste tonnage from 2007 to 2011 shown on Figure 1 is 440,131 tons. Should there be any explanation of the tonnage discrepancy?

Comment 3: The Closure Plan must describe the contents of the closure report (CQA Certification Report), which will be certified and signed by a professional engineer registered in the State of North Carolina and the deed recordation in accordance with the Rules15A NCAC 13B .0543(c)(7) & (8).

Post-Closure

Comment 1: (Subsection 3. "Post-Closure Maintenance") The post-closure cares and activities should also address, but not limit to,

i. Prevent run-on and run-off from eroding or otherwise damaging the final cover (in addition to maintain and correct the effects of settlement and subsidence of the soil cap).
ii. Protect, maintain, and repair surveyed benchmarks and storm water drainage devices/structures and BMPs (in addition to groundwater monitoring wells, surface water monitoring/sampling gauges, and LFG wells).
iii. Protect the existing vegetation in the soil cap by mowing (twice per year), fertilizing (once every three year), re-seeding and/or re-sodding to replace the dead vegetation and in the buffer zone (green way) (once every three year).
iv. Maintain and repair the security fencing and gates and access roads, contingent to the inspection report.

Please revise the Post-Closure Plan in accordance with the above-mentioned guidelines.

Comment 2: (Subsection 4. "Inspection Plan") The Inspection Plan should also describe:

i. The responsible parties (entities and credential requirements) who will conduct the proposed monthly inspection?
ii. The reporting procedures and actions to be taken if damage is reported and repair is required upon completion of an inspection.
iii. In addition to the routine monthly inspection, the Plan must also address the post-incidence inspections including, but not limited to, hurricanes, heavy rainfall events, written or verbal complains, vandalisms, or fires.
iv. Inspection records need to be kept in the operating record.

Please revise the Plan accordingly.

Comment 3: (Subsection 6. "Post-Closure Cost Estimate") The Quantity of "Inspections/Record Keeping" is 12 because the inspection is proposed to be conducted monthly in the Post-Closure Plan. It is recommended the frequency of "mowing" be twice per year to prevent potential fire hazard and complaint of nuisances. Please revise the Post-Closure Estimate accordingly.

Section F - Monitoring Plans (Plan)

Comment 1: Each monitoring plan must describe who will be responsible for conducting the monitoring/sampling event, the sampling personnel credential and training requirements such as knowing groundwater and surface water sampling protocols, the well purging and gas monitoring procedures. Please clarify.

Comment 2: What the health and safety provisions are there to be implemented by the sampling personnel while they are conducting the proposed monitoring. Please provide the site-specific and job specific health and safety plan as a portion of the Monitoring Plan.

Section F. 2 - Surface Water Monitoring Plan

Comment 1: Typo. The Surface Water Monitoring Plan is in Appendix III, Section 2.B.4 in the Permit Application. Please correct the typo.

Comment 2: (Section 2.B.4 of Appendix III)

i. The Plan must discuss the monitoring report submittal requirements. Please clarify.
ii. In accordance with the Rule 15A NCAC 13B .0544(c)(2), the Plan must include the responsibility for sample collection and analysis.
iii. The Plan should include, but not limited to, the sample collection protocols – (procedures and techniques), sample container, preservation, and shipment, chain-of-custody control, monitoring constituents, field QA/QC procedures, testing methods, the surface water quality standards (must not exceed 15A NCAC 02B standards contingent to the classification of Poppaw Creek). The USEPA document – "Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001) can be referenced as the guidance document for preparation of the Surface Water Monitoring Plan. The EPA document can be downloaded from the web address www.epa.gov/region4/sesd/eisopqam/eisopqam.html.

Please revise the Plan accordingly.

Section F.3 - Gas Control Plan

Comment 1: The proposed location of gas probes for the Phase 3 landfill expansion cannot be located on the Figure MP-01. Two locations labeled GP-1 and GP-2 are found on the Figure MP-01, but there is no indication if they are the proposed location of gas probes. Please revise the Figure MP-01 to clearly indicate where the proposed gas probes are located. Please also add these gas probes identification to the context.

Comment 2: The Applicant needs to explain the reasons

i. Why these proposed gas probe locations were selected as the "optimum" ones in the Plan according to the Rule 15A NCAC 13B .0544(d)(2)(A).
ii. Why there are no gas probes installed around the existing Phases 1 and 2 landfill units?

Please clarify.

Please note the stated-above comments were concluded from the meeting held on February 11, 2008. In pursuit of our phone conservation on February 14, 2008, I summarize the additional comments on the Application for Permit to Construct at Coble C/D LF Phase 3 Expansion below:

1. Provide the new Franchise Agreement which mentioned in the Facility Plan.
2. Provide Material Reclamation Info/agreement letter from D.H. Griffin Wrecking Co, Inc. and Federal Waste Paper Company.
3. Provide Waste Screening Forms.
4. Provide Post-closure inspection forms.

Please incorporate requested information, document, revisions, and responses to a new submittal including a written hard copy and an electronic copy (including figures) of the revised Application for Permit to Construct. Should you have any questions of the comments please call me at (919) 508-8507.

Sincerely,

Ming-Tai Chao, P.E.
Environmental Engineer II
Solid Waste Section

cc: Evan Andrews, P.E. Joyce Engineering, Inc
Ed Mussler, SWS
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Central File